Atty Docket: IDF 1502 (4000-02800)

Patent

AMENDMENTS TO CLAIMS

Listings of claims:

1-19. (Cancelled)

20. (New) In an integrated services hub for coupling digital signals on a wide area network to and from analog signals in residential or business telecommunications equipment, the hub having a CPU controlling the operations of the hub, a CODEC, a local clock, an input buffer coupling digital signals received from the wide area network to the CODEC, the buffer implemented in memory operated by the CPU, and a baud rate generator in the CPU, a method for generating a sampling rate of coupling digital signals from the input buffer to the CODEC synchronized with a rate at which digital signals are received from the wide area network, comprising:

using the CPU to produce a fill level indicator representative of the capacity of the buffer that contains digital signals received from the wide area network and not yet coupled to the CODEC,

coupling the local clock to an input of the baud rate generator,

using the CPU to generate a divisor coupled to the baud rate generator,

using an output of the baud rate generator as the sampling rate for coupling digital signals from the input buffer to the CODEC, and

adjusting the divisor to maintain the fill level of the input buffer within a preselected range.

21. (New) The method of claim 20, further comprising: decreasing the divisor when the fill level increases above a first preselected value, and increasing the divisor when the fill level decreases below a second preselected value. Atty Docket: IDF 1502 (4000-02800)

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- 22. (New) The method of claim 20, further comprising:
- using the output of the baud rate generator as a sampling rate for coupling analog signals from the residential or business telecommunications equipment to the CODEC.
- 23. (New) An integrated services hub for coupling digital signals in a wide area network to and from analog signals in residential or business telecommunications equipment, comprising:
 - a CPU controlling the operations of the hub,
 - a CODEC,
- an input buffer coupling digital signals received from the wide area network to the CODEC, the buffer implemented in memory operated by the CPU,
 - a local clock coupled to the CPU,
- a baud rate generator implemented in the CPU having a first input coupled to the local clock, having a second input for receiving a divisor, and having an output coupled to the input buffer providing a sampling rate of coupling digital signals from the input buffer to the CODEC,

the CPU producing a fill level indicator representative of the capacity of the buffer that contains digital signals received from the wide area network and not yet coupled to the CODEC,

the CPU generating a divisor coupled to the baud rate generator, and adjusting the divisor to maintain the fill level of the input buffer within a preselected range,

whereby the sampling rate of coupling digital signals from the input buffer to the CODEC is synchronized with a rate at which digital signals are received from the wide area network.

24. (New) An integrated services hub according to claim 20, wherein:

the CPU decreases the divisor when the fill level increases above a first preselected value, and

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the CPU increases the divisor when the fill level decreases below a second preselected value.

25. (New) The method of claim 20, wherein:

the CODEC includes an analog to digital converter having a first input receiving analog signals from the residential or business telecommunications equipment, an output providing digitized signals coupled to the wide area network, and a second input coupled to the baud rate generator output and controlling the rate at which the analog signals are sampled by the CODEC.